

CLAIMS

1. A battery connector system for use in connecting a battery in an uninterruptible power supply comprising:

- 5 a connector receptacle having a housing, the connector receptacle positioned on a battery pack having a positive battery lead and a negative battery lead;
 a first wire and a second wire coupled to the connector receptacle, the first wire and the second wire extending from the housing to connect the connector receptacle with the positive battery lead and the negative battery lead;
- 10 a connector plug positioned in an electronic device,
 wherein the connector receptacle includes alignment surfaces for mating with the connector plug upon insertion of the battery pack into the uninterruptible power supply; and
 wherein the connector plug includes alignment surfaces to align with the
- 15 alignment surfaces of the connector receptacle.

2. The battery connector system of claim 1, wherein the battery pack is comprised of a first battery and a second battery, and wherein each of the first battery and the second battery include a positive battery lead and a negative battery lead.

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3. The battery connector system of claim 2, wherein the first wire connects to the positive lead of the first battery and the second wire connects to the negative battery lead of the second battery.

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4. The battery connector system of claim 3, wherein the integral alignment features include a substantially bell-shaped housing embodying the connector receptacle, the bell-shaped housing having lead-in angles on a proximal end of the housing.

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5. The battery connector system of claim 4, wherein the connector plug includes curved walls forming a small perimeter on a proximal end and a large perimeter on a distal end relative to the connector receptacle.

6. The battery connector system of claim 5, wherein the connector receptacle is positioned on the battery pack with an adhesive bonding joint.

5 7. The battery connector system of claim 6, wherein the connector receptacle housing includes a rib positioned on a bottom face of the housing to slide into a position in a groove formed on the battery pack.

8. The battery connector of claim 7, wherein the connector receptacle housing further
10 includes an edge stop positioned on an end of the housing to align the housing on an edge of the battery pack.

9. The battery connector system of claim 8, wherein the connector plug is retained in the electronic device with a snap inserted into an aperture formed in the electronic device.

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10. The battery connector of claim 9, wherein the snap includes a knob to insert into an aperture, and wherein the dimensions of the knob are substantially smaller than the dimensions of the aperture.

20 11. The battery connector of claim 10, wherein the connector plug is float connected to the electronic device.

12. A dual battery pack providing automatic connection to an electronic device having a connector plug comprising:

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a first battery having a first positive terminal and a first negative terminal;
a second battery having a second positive terminal and a second negative terminal;
a groove formed between the first battery and the second battery; and
a battery connector system having:

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a connector receptacle having a housing;
a rib, positioned on a bottom surface of the housing for insertion into the groove;

a first wire extending from the connector receptacle to connect with the first positive terminal;

a second wire extending from the connector receptacle to connect with the second negative terminal; and

5 lead-in angles on an end of the housing for self alignment with the connector plug.

13. The dual battery pack of claim 12, wherein the connector plug includes curved walls forming a small perimeter on a proximal end and a large perimeter on a distal end relative to
10 the connector receptacle.

14. The dual battery pack of claim 12, wherein the connector receptacle is positioned on the battery pack with an adhesive bonding joint.

15 15. The dual battery pack of claim 12, wherein the connector receptacle housing includes an edge stop positioned on a bottom end surface of the housing for alignment with an edge of the battery pack.

16. The dual battery pack of claim 12, wherein the connector plug is float connected to
20 the electronic device.

17. The dual battery pack of claim 16 wherein the connector plug further comprises at least one snap to connect to an aperture of the electronic device.

25 18. The dual battery pack of claim 17 wherein the at least one snap is substantially smaller than the aperture, and wherein the at least one snap freely moves while in the aperture.

19. A method of coupling an electrical device to an internal power source comprising:
30 attaching a connector receptacle to a battery pack including connecting the receptacle to leads of the battery pack;

mounting a connector plug in the electronic device to facilitate automatic coupling with the receptacle;

aligning the receptacle with the connector plug and inserting the battery pack into the electronic device; and

5 mating the receptacle and the connector plug in the electronic device.

20. The method of claim 19 further comprising assembling the battery pack, and wherein assembling the battery pack includes aligning the receptacle on the battery pack using a tongue-and-groove configuration.

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21. The method of claim 20 further comprising aligning the receptacle on the battery pack using an edge stop positioned to contact a front edge of the battery pack.

22. The method of claim 21 wherein float mounting includes snapping the connector plug onto a portion of the electronic device such that the connector plug is movably connected on the electronic device.

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